

Claims

What is claimed is:

1. A method of maintaining a constant ground speed of a work machine having an engine, powertrain, and at least one electronic control module (ECM), the method comprising;
 - sensing a parameter indicative of the ground speed of the work machine and responsively producing a signal indicative of the actual ground speed;
 - providing a predetermined maximum ground speed of the work machine;
 - receiving the signal indicative of the actual ground speed and the predetermined maximum ground speed of the work machine by the at least one ECM;
 - applying an algorithm to determine desirable RPM of the engine of the work machine; and
 - modulating engine RPMs to the desirable engine RPMs to maintain a constant ground speed of the work machine.
2. The method of claim 1, wherein sensing the parameter indicative of ground speed includes sensing torque converter output speed.
3. The method of claim 1, wherein sensing the parameter indicative of ground speed includes sensing transmission output speed.
4. The method of claim 1, wherein sensing the parameter indicative of ground speed includes sensing axle speed.

5. The method of claim 1, wherein sensing the parameter indicative of ground speed includes sensing the ground speed of the work machine.

6. The method of claim 1, wherein applying the algorithm includes;

determining a minimum high idle RPM of the work machine;

calculating a RPM of the engine of the work machine using the parameter indicative of ground speed of the work machine and the predetermined maximum ground speed of the work machine;

determining lowest RPM value between the minimum high idle RPM and the calculated RPM of the engine; and

generating a modulated fuel signal based on the lowest RPM value.

7. A method of maintaining a constant ground speed of a work machine having an engine, powertrain, and at least one electronic control module (ECM), the method comprising;

sensing torque converter output speed and producing a torque converter output signal indicative of the torque converter output speed;

sensing engine output speed and producing an engine output signal indicative of the engine output speed;

receiving the torque converter output signal and the engine output signal and producing a torque converter speed ratio by the at least one ECM;

providing a predetermined torque converter output speed indicative of the maximum ground speed of the work machine; and

determining a desirable engine RPM in response to the torque converter speed ratio and the predetermined torque converter output speed that is indicative of the maximum ground speed of the work machine.

8. The method claim 7, wherein providing the predetermined torque converter output speed includes prescribing the predetermined torque output speed by at least one of on-board and remotely.

9. The method of claim 8, wherein determining a desirable engine RPM includes;

- determining a minimum high idle RPM of the work machine;
- calculating a RPM of the engine of the work machine using the predetermined torque converter output speed and the torque converter speed ratio;
- determining the lowest RPM value between the minimum high idle RPM and the calculated RPM of the engine; and
- generating a modulated fuel signal based on the lowest RPM value.

10. A method of maintaining a constant ground speed of a work machine having an engine, powertrain, and at least one electronic control module (ECM), the method comprising;

- sensing a parameter indicative of the ground speed of the work machine and responsively producing a signal indicative of the actual ground speed;
- providing a predetermined maximum ground speed of the work machine;
- receiving the signal indicative of the actual ground speed and the predetermined maximum ground speed of the work machine by the at least one ECM;
- modulating the fuel to the engine to maintain a constant ground speed of the work machine.